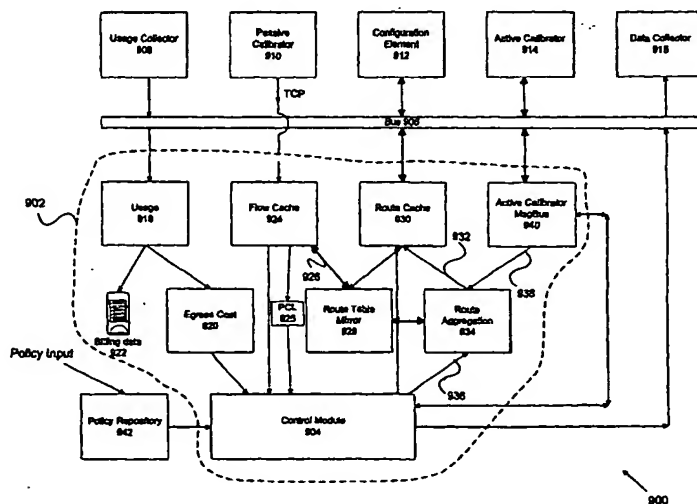(72) Inventors: KLINKER, Eric; 201 Fourth Street #511, Oakland, CA 94607 (US). JOHNSON, Jeremey; 3913 Cerrito Avenue, Oakland, CA 94611 (US). MCCANNE, Steven; 54 El Camino Real, Berkeley, CA 94705 (US). MCKERNAN, Daniel; 10164 South Foothill Boulevard, Cupertino, CA 95014 (US). CHAFFEE, Gordon; 3700 Warwick Road, Fremont, CA 94555 (US). FRALEIGH, Charles; 883 Helena Drive, Sunnyvale, CA 94087 (US).

(74) Agents: BACKUS, Kenneth et al.; 2225 E. Bayshore Road, Suite 200, Palo Alto, CA 94303 (US).

(54) Title: DATA NETWORK CONTROLLER

(57) Abstract: The present invention provides for a system and method for data network control. Using a flow control system, embodiments of the present invention can analyze traffic flow volume and performance (910,924), incorporate usage, billing, and cost control data to yield an improved data network controller. Efficiency in data routing is improved while costs are decreased by enabling the selection of the optimal performance data route. Cost constraints and costs are minimized for an overall data load (908,918,922,920). Given a diverse set of cost structures for available transit providers, the overall system cost can be minimized by distributing traffic in a manner that takes advantage of the diverse billing structure and yet maintains acceptable performance levels. Systems and methods in accorance with embodiments of the present invention determine projected flow performance and projected

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/35488

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7)　　:　G06F 15/173
US CL　　:　709/224

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
　　U.S. : 709/224,225,221

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, IEE Online search terms: QOS, allocation, bandwidth, quality of service

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,047,326 A (KILKKI) 04 April 2000, column 9-17	1-21
Y	US 6,055,571 A (FULP et al.) 25 April 2000, column 7-13	1-21
Y	US 6,154,778 A (KOISTINEN et al.) 28 November 2000, column 9-11	1-21
A	US 5,724,513 A (BEN-NUN et al.) 03 March 1998	1-21
A	US 5,898,668 A (SHAFFER) 27 April 1999	1-21

☐ Further documents are listed in the continuation of Box C.　　☐ See patent family annex.

*	Special categories of cited documents:	"T"	late, document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance		
"E"	earlier application or patent published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/US	Authorized Officer
Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Meng-Ai M An
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